

3MP IP INTERIOR/EXTERIOR DOME CAMERA: IPFD3TI

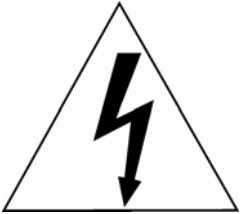



Please read this manual thoroughly before use and keep it handy for future reference.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

CAUTION

	<table border="1"><tr><td>CAUTION</td></tr><tr><td>RISK OF ELECTRIC SHOCK DO NOT OPEN</td></tr></table>	CAUTION	RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION				
RISK OF ELECTRIC SHOCK DO NOT OPEN				
<p>WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL</p>				

EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC INFORMATION: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

CE COMPLIANCE STATEMENT

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings, Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug, A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety, If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used. Use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. **CAUTION – THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.**
16. **Use satisfy clause 2.5 of IEC60950-1/UL60950-1 or Certified/Listed Class 2 power source only.**
17. ITE is to be connected only to PoE networks without routing to the outside plant.



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1 Introduction

This installation manual applies to the IPFD3TI network camera.

The network camera is fully featured for security surveillance and remote monitoring needs. It is based on the DSP compression chip, and makes it available on the network as real-time, full frame rate Motion JPEG and H.264 video streams.

The alarm input and alarm output can be used to connect various third party devices, such as, door sensors and alarm bells.

1.1 Components

This system comes with the following components;

Dome Camera	1
Installation Guide/CD	1
Drilling Guide Label	1
Accessory Kit	1

Note 1. Check your package to make sure that you received the complete system, including all components listed above.

Note 2. Adapter for DC 12V is not supplied.

1.2 Key Features

- **Brilliant video quality**

The network camera offers the highly efficient H.264 video compression, which drastically reduces bandwidth and storage requirements without compromising image quality. Motion JPEG is also supported for increased flexibility.

- **Wide Dynamic Range**

The network camera provides digital WDR (Wide Dynamic Range) that improves video exposure quality in scenes with high contrast between bright and dark areas in the video, for example a shady area and a sunny area in the same scene.

- **Dual or Triple Streams**

The network camera can deliver dual or triple video streams simultaneously at full frame rate in all resolutions up to 3MP (2048 x 1536p) using H.264 and Motion JPEG. This means that several video streams can be configured with different compression formats, resolutions and frame rates for different needs.

- **Intelligent video capabilities**

The network camera includes intelligent capabilities such as enhanced video motion detection. The network cameras external inputs and outputs can be connected to devices such as sensors and relays, enabling the system to react to alarms and activate lights or open/close doors.

- **Improved Security**

The network camera logs all user access, and lists currently connected users. Also, its full frame rate video can be provided over HTTPS.

- **PoE (Power over Ethernet)**

This network camera can be powered through PoE (IEEE802.3af), which simplifies installation since only one cable is needed for carrying power, as well as video controls.

- **ONVIF Certificate**

This is a global interface standard that makes it easier for end users, integrators, consultants, and manufacturers to take advantage of the possibilities offered by network video technology. ONVIF enables interoperability between different vendor products, increased flexibility, reduced cost, and future-proof systems.

- **Micro-SD Recording support**

The Network Camera also supports a micro-SD memory slot for local recording with removable storage of type SDHC and SDXC.

- **Audio support**

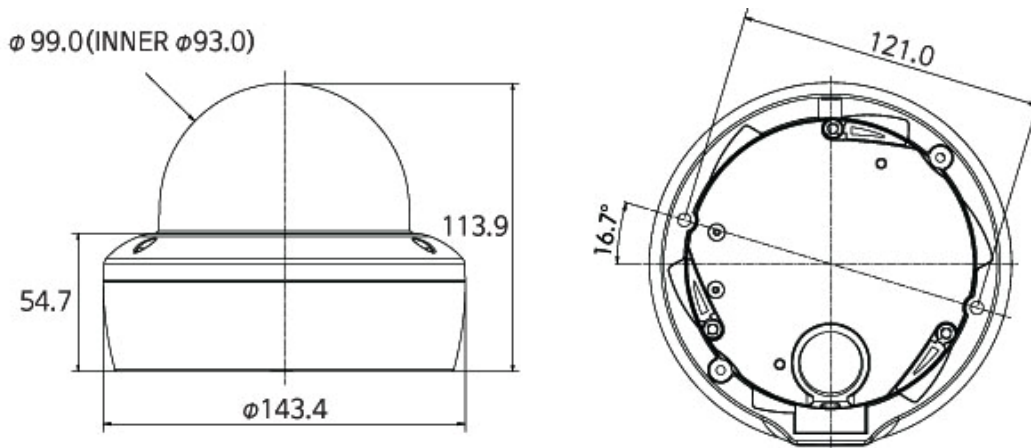
The Network Camera also supports two-way audio.

2 Installation

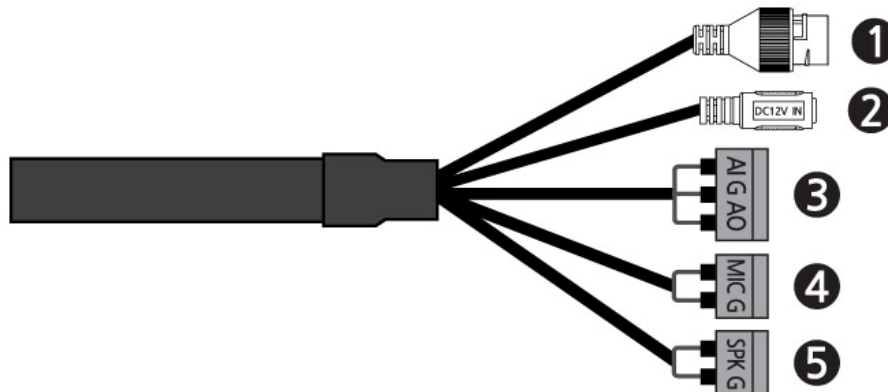
For the operation of the Network Camera, it is necessary to connect a network cable for data transmission, power connection from supplied power adapter. Depending on operation methods, it is possible to connect an alarm cable additionally. For its fixation on different locations, please consult with an installer.

2.1 Overview

• Dimension



• Extension Cable



NO	Item	Description
1	RJ-45	Ethernet, RJ-45 port compatible with 10/100Mbps PoE Modular Jack
2	DC Jack	Main Power, DC Jack, DC12V
3	AI: Alarm In G: GND AO: Alarm Out	Alarm input and output, 3pin terminal
4	MIC: Audio In G: GND	Audio line input, 2pin terminal
5	SPK: Audio Out G: GND	Audio line output, 2pin terminal

2.2 Installing Camera

Carefully remove the contents from the box, and verify that nothing was damaged in shipment.

• Surface Type

1. Loosen the three torx screws located midway up the front of the housing, leave the screws intact in the front portion (Fig. 1)
2. Drill the mounting location using the supplied Drilling Guide Label. (Fig. 2)
3. Attach the surface Mount to the ceiling or wall using suitable fasteners. The supplied M5x30 tapping screws are used only if they are applicable. (Fig. 2)
4. Insert the bottom case into the surface mount and turn the locking flap to fasten the bottom case to the surface mount using 3 screws. (Fig.3, Fig. 4)
5. Close the housing by fastening three torx screws.

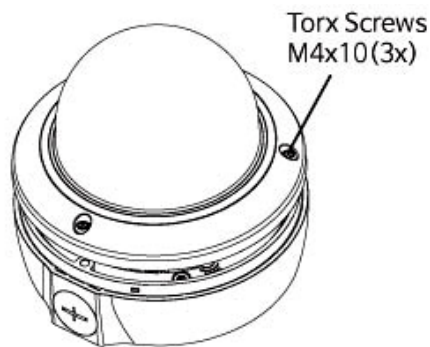


Figure 1

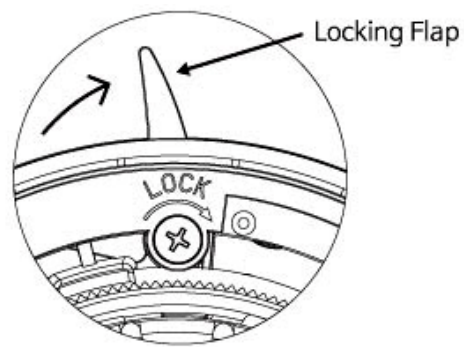


Figure 3

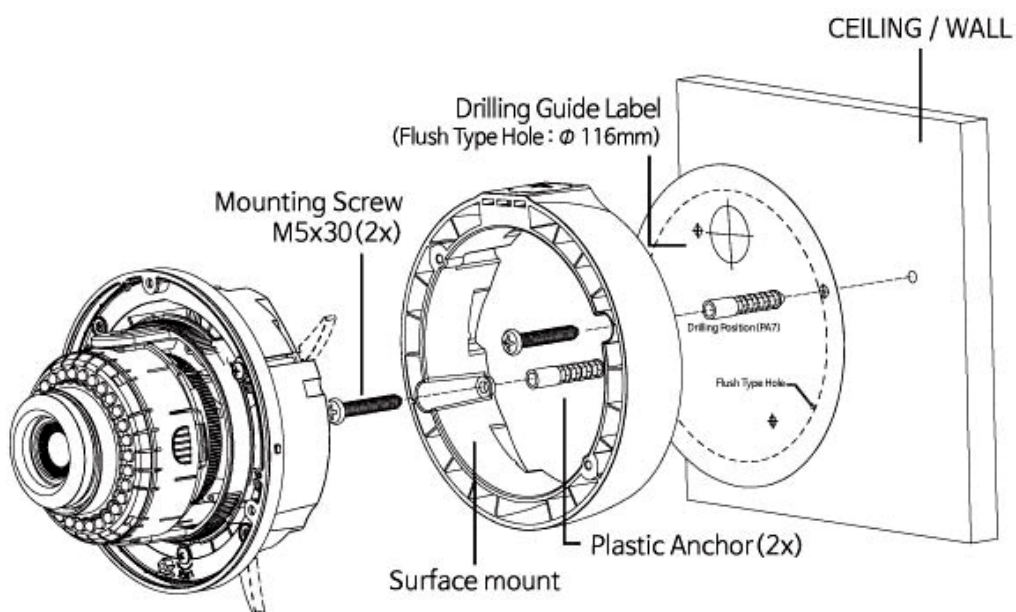


Figure 2

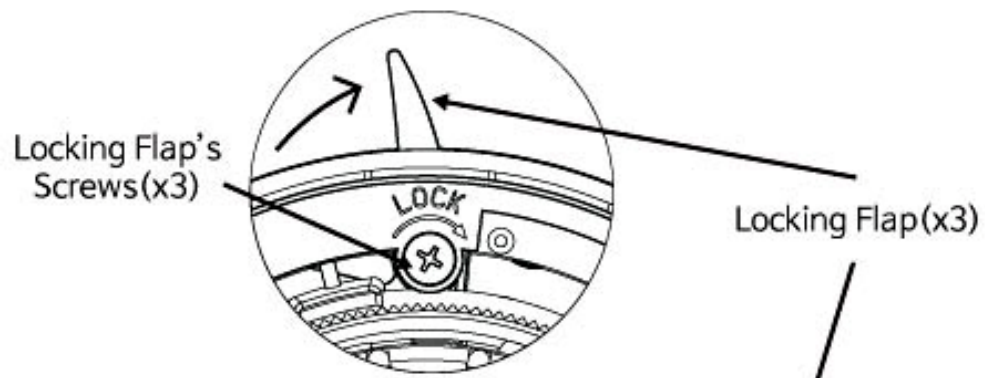


Figure 3

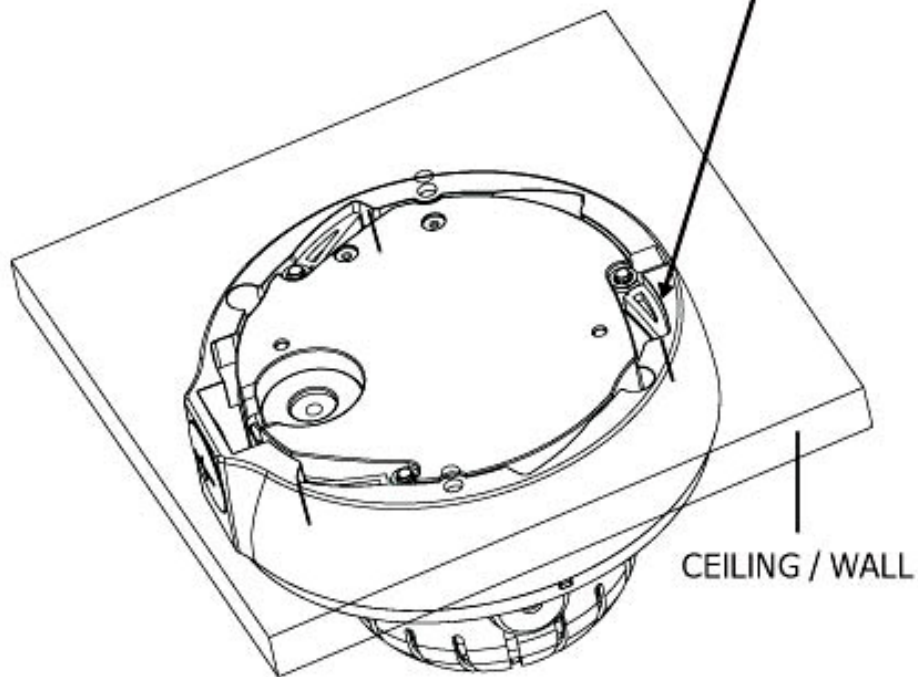


Figure 4

• Flush Type

Note: The ceiling tile must be thicker than 0.15inch (37mm)

1. Loosen the three torx screws located midway up the front of the housing, leave the screws intact in the front portion (Fig. 1)
2. Remove the ceiling tile from the ceiling. Draw a circle whose diameter is 116mm on the tile (You can use carton with a hole). Cut the circle out of the ceiling tile. (Fig. 2)
3. Insert the bottom case into the ceiling tile and turn the locking flap to fasten the bottom case to the ceiling tile using 3 screws. (Fig.3)

Note: When installing the camera flush with the ceiling, three locking flaps hold firmly which makes it easy to install. (Fig. 4)

4. Close the housing by fastening three torx screws.

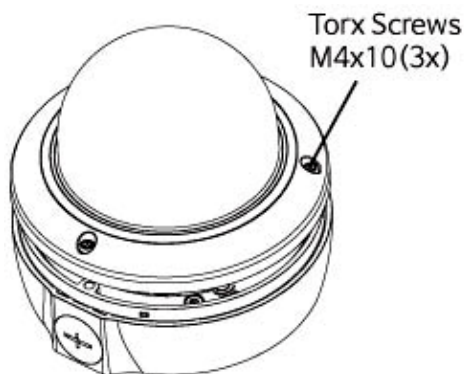


Figure 1

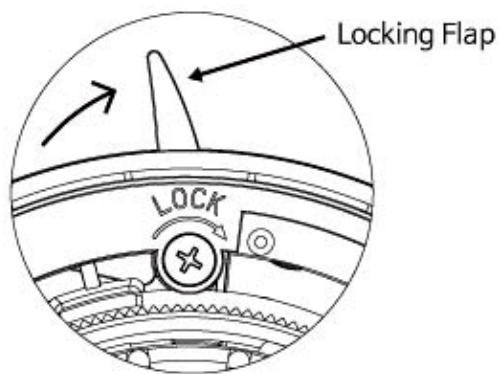


Figure 3

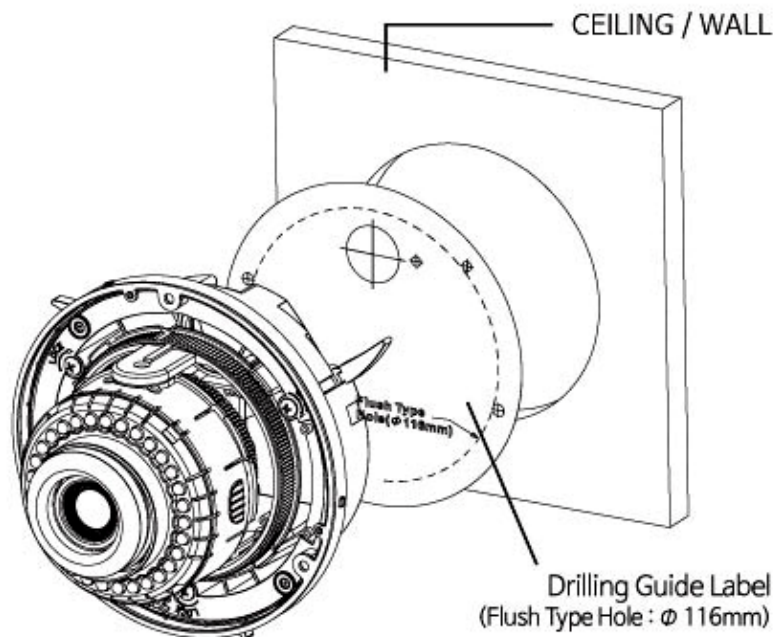


Figure 2

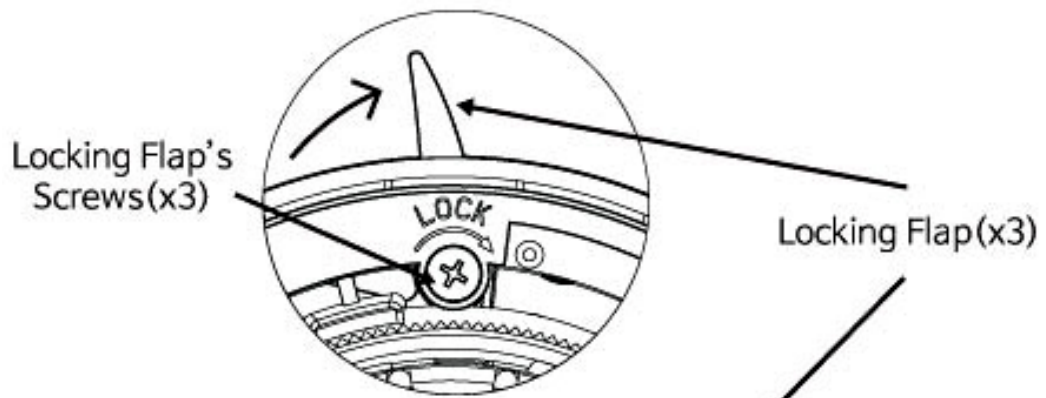


Figure 3

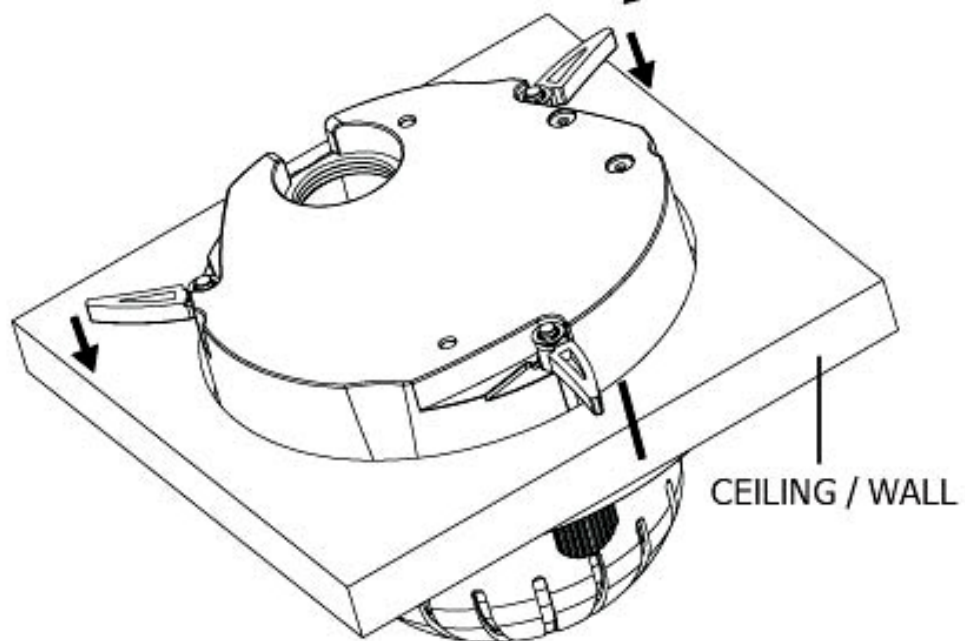
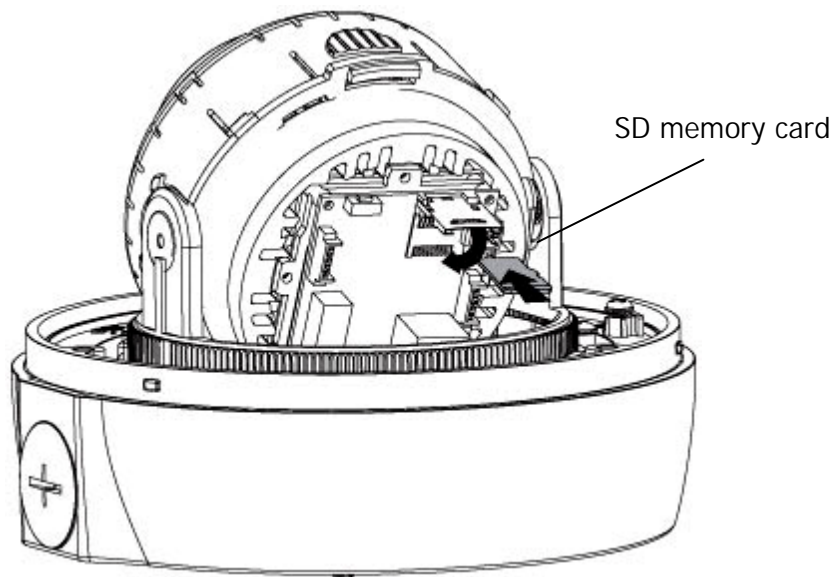


Figure 4

2.3 Connection

- **Micro SD memory card insertion**

Remove the bubble of the camera to insert the SD memory card.



- **Connecting to the RJ-45**

Connect a standard RJ-45 cable to the network port of the network camera. Generally a cross-over cable is used for directly connection to PC, while a direct cable is used for connection to a hub. You can also use a router featuring PoE (Power over Ethernet) to supply power to the camera.

- **Connecting Alarms**

AI(Alarm In): You can use external devices to signal the network camera to react on events. Mechanical or electrical switches can be wired to the AI (Alarm In) and G (Ground) connectors.

G(Ground): Connect the ground side of the alarm input and/or alarm output to the G (Ground) connector.

AO(Alarm Out): The network camera can activate external devices such as buzzers or lights. Connect the device to the AO (Alarm Out) and G (Ground) connectors.

- **Connecting the Power**

Connect the power of 12 VDC 450mA for the network camera. Connect the positive (+) pole to the '+' position and the negative (-) pole to the '-' position for the DC power.

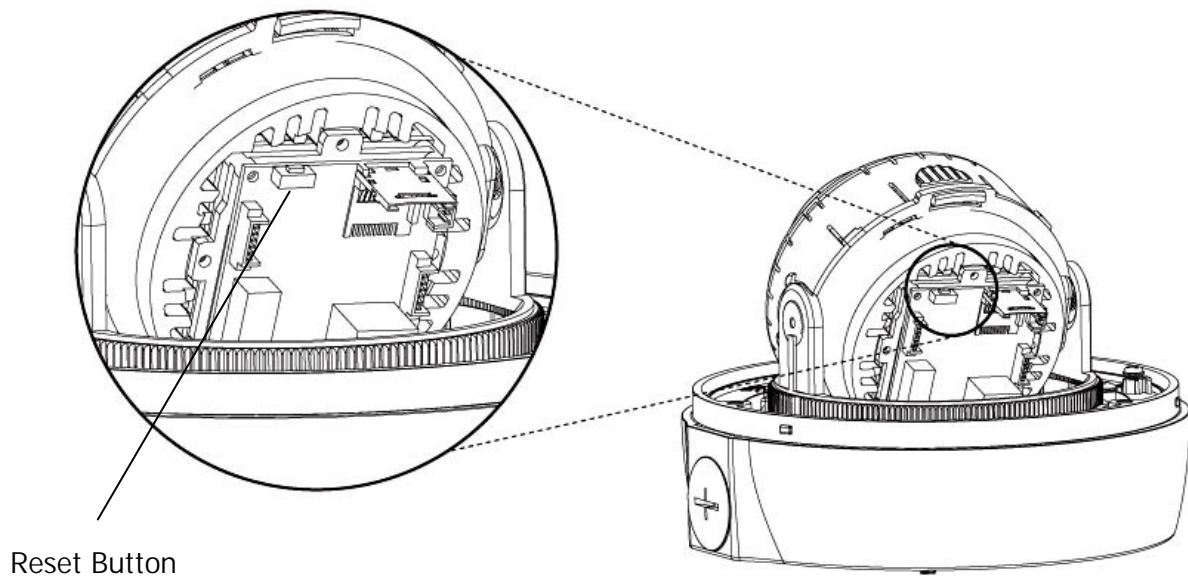
- Be careful not to reverse the polarity when connecting the power cable.
- A router featuring PoE (Power over Ethernet) can also be used to supply power to the camera.
- For the power specifications, refer to the Appendix, Product Specification.
- If PoE and 12 VDC are both applied, the camera will be supplied with power from PoE.

- **Connecting Audio**

Connect Speaker to Audio line output and external Mic to Audio input line.

2.4 Resetting to the factory default settings

To reset the network camera to the original factory settings, go to the Setup > System > Maintenance web page (described in “System > Maintenance” of User’s Manual) or use the **Reset** button on the network camera, as described below.



• Using the Reset button:

Follow the instructions below to reset the network camera to the factory default settings using the Reset button.

1. Switch off the network camera by disconnecting the power adapter.
2. Press and hold the Reset button while reconnecting the power.
3. Keep the Reset button pressed for at least 2 or more seconds.
4. Release the Reset button.
5. The network camera resets to factory defaults and restarts after completing the factory reset.

CAUTION: When performing a Factory Reset, you will lose any settings that have been saved. (Default IP 192.168.30.220)

A Appendix

A.1 Product Specification

Model			Network Camera
Image	Lens		Varifocal 2.8mm ~ 12.0mm, F1.4, DC IRIS
	Angle of View		97 °(H) ~ 37°(H)
	Image Sensor	Type	1/2.8" Sony Exmor CMOS
		Pixels	2048(H) x 1536(V)
	Min. Illumination		Color: 0.1 Lux @ F1.4 B/W: 0 Lux @ F1.4
	Scanning Mode		Progressive Scan
	Wide Dynamic Range		D-WDR
	Day and Night Mode		True D/N (Auto, Day, Night)
	Noise Reduction		2DNR, 3DNR
	Digital Zoom		Yes (ROI)
	Exposure Control		Auto
	Auto White Balance Control		Auto, Incandescent, Fluorescent, Outdoor, Manual
	Back Light Compensation		Yes
	Image Effect		Flip, Mirror, Aisle, Defog, HLC, S-LDC
	Flicker Free Mode		50Hz, 60Hz
	Shutter Speed		Auto(1/10,000 ~ 1 sec), Manual
Video/ Audio	IR Illuminator	Quality	30 IR LEDs
		Angle	76°
		Distance	up to 30m
Video/ Audio	Video Compression		H.264 (Baseline, Main, High Profile), MJPEG
	Bitrate Control		CVBR, VBR
	Video Resolution		2048x1536, 1920x1080, 1280x1024, 1280x720/960, 1024x768, 704x480/576, 640x360/480, 320x240
	Video Frame Rate		Max. 25fps/30fps
	Video Streaming		25/30fps (Triple Stream : H.264 x 2, MJPEG x 1)
	Composite Out		-
	Audio Compression		G.711
	Audio Streaming		2 Way
System	Video Contents Analysis		Line Detector, Field Detector
	Motion Detection Area		16 Programmable Area (Include Area 8, Exclude Area 8)
	Privacy Mask		8 Programmable Zone
	FTP Uploading		MJPEG
	Event Notification		E-mail, FTP, Notification Server, XML Notification, Audio Alert, AIHM
	Audio Alert		User-Defined 3 Audio files
	Login Authority		Administrator, Operator, Guest
	Event Buffering	FTP	Pre : 30sec, Post : 30sec
		SD Record	Pre : 10sec, Post : 60sec
	Manual Trigger		4 Programmable Trigger
	Security		Multi User Authority, IP Filtering, HTTPS, SSL
	Network Time Sync		NTP Server, Synchronize Computer, Manual
	Software Reset		Restart, Reset, Factory Default
	Hardware Factory Reset		Yes
	Auto Recovery		Backup, Restore
	Remote Upgrade		Web Browsing(IE, Chrome, Safari, Firefox), SmartManager
	SD Recording Mode		Event, Continuous

Network	Protocols	TCP/IP, UDP, IPv4/IPv6, HTTP, HTTPS, QoS, FTP, UPnP, RTP, RTSP, RTCP, DHCP, ARP, Zeroconf, Bonjour
	Client Software	Web, SmartManager, Client S/W, Mobile S/W
	Max. User Connection	Live : 10 Users, Playback : 3 Users
	API Support	Open API, ONVIF Compliance
	Mobile Support	Android, i-OS
External In/Out	Audio	1 Input, 1 Output (Terminal Block)
	Alarm	1 Input, 1 Output (Terminal Block)
	Ethernet	RJ-45 (10/100Base-T)
	SD Card	SDHC, SDXC
ETC	Operating Humidity	0 ~ 90% RH (Non-condensing)
	Operating Temperature	-30°C ~ +45°C
	Power Supply	PoE (IEEE802.3af compliant, Class0), 12VDC
	Power Consumption	DC 12V 450mA, 5.4W / PoE 120mA, 5.7W (with IR on)
	Dimensions	143.4mm(ϕ) x 113.9mm(H)
	Net Weight	Approx. 720g
	Ingress Protection	IP66

> Specifications are subject to change without notice.



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DOME CAMERA: IPFD3TI**